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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,250	02/15/2002	Juha Rasanen	915-004.5	3250

4955 7590 12/10/2007
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EXAMINER

DANIEL JR, WILLIE J

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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12/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/078,250

Applicant(s)

RASANEN, JUHA

Examiner

Willie J. Daniel, Jr.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 8-10, 13-23, 25-29 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 8-10, 13-23, 25-29 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment filed on 19 September 2007. **Claims 1-3, 6, 8-10, 13-23, 25-29, and 31-34** are now pending in the present application and **claims 4-5, 7, 11-12, 24, and 30** are canceled. This office action is made **Final**.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6, 8-10, 13, 16, 18-20, 22-23, 25, 28-29, and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bäckström (US 5,903,851)** in view of **Sayers et al.** (hereinafter Sayers) (**US 6,539,237 B1**) and **Rasmussen (US 6,088,600)**.

Regarding **claim 1**, Bäckström discloses a method (see col. 2, lines 53-57, 61-67; Fig.1), where a request for access to data or services provided by a remote host, comprising:
monitoring on a signaling path (e.g., connection) between mobile station (15) which read on the claimed "end terminals" via a telecommunication network (e.g., PLMN and PSTN) a negotiation signaling for a multimedia call of respective call parties (see col. 2, lines 53-57, 61-67; col. 3, lines 35-51; Fig. 1), where a first connection is established and interworking unit monitors the call circuit connection between a data terminal equipment and an application host by examining the contents of ARQ protocol frames,

said monitoring being executed in an interworking function portion of one of said end terminals (see col. 4, lines 49-65; col. 5, lines 1-10; Fig. 4), where a data connection mode is initialized between the DTE (10) and the MS (15) and monitored at the MSC (30) for the data transfer and request of the call connection circuit;

storing connection information detected in said monitoring (see col. 4, lines 7-11), where the first or original call circuit connection is stored within the register (88) of the MSC (30),

using said detected connection information to generate a signaling towards at least one of said end terminals to establish said supplementary call service, when a supplementary call service is invoked by one of said call parties (see col. 4, lines 18-31), where after a period of inactivity a second call circuit is requested by a data terminal equipment, subsequently comparing the current called party identification information with one stored in the MSC register for the first call circuit connection.

when the call is in a call hold condition (see col. 3, lines 35-51; col. 2, lines 37-39). As a note, Bäckström further teaches of a timer (112) for measuring periods (see col. 4, lines 42-45) releasing the radio link between the MCS and MS and maintaining a connection between the MS and DTE to avoid having the DTE lose synchronization (see col. 4, lines 49-63).

Bäckström does not specifically disclose having the feature(s) storing connection information in one of said end terminals, said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding parameter used in the multimedia call; wherein said supplementary call service is a call hold supplementary service; and stopping resynchronization attempts towards one of said call parties and stopping a related timer in order to prevent a call failure. However, the examiner maintains

that the feature(s) said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding parameter used in the multimedia call; wherein said supplementary call service is a call hold supplementary service was well known in the art, as taught by Sayers.

In the same field of endeavor, Sayers discloses the feature(s) said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding parameter used in the multimedia call (see col. 11, lines 19-23; col. 12, lines 6-29; col. 13, lines 1-55), where RIL3-CC, H.245, and SMS-PP provide transcoding parameters;

wherein said supplementary call service is a call hold supplementary service (see col. 11, lines 19-23; col. 12, lines 6-29). As a note, Sayers further discloses when the call is in a call hold condition (see col. 12, lines 6-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the feature(s) said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding parameter used in the multimedia call; wherein said supplementary call service is a call hold supplementary service, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13). The combination of Bäckström and Sayers does not specifically disclose having the feature(s) storing connection information in one of said end terminals, stopping resynchronization attempts towards one of said call parties and stopping a related timer in

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order to prevent a call failure. However, the examiner maintains that the feature(s) storing connection information in one of said end terminals, stopping resynchronization attempts towards one of said call parties and stopping a related timer in order to prevent a call failure was well known in the art, as taught by Rasmussen.

In the same field of endeavor, Rasmussen discloses the feature(s) storing connection information in one of said end terminals (see col. 6, lines 14-28), where the cellular data endpoint (10) has a modem (100) that sets (or stores) connection-related parameters and during a re-establishing of a connection uses the connection-related parameters,

stopping resynchronization attempts towards one of said call parties (see col. 6, lines 11-53) and

stopping a related timer in order to prevent a call failure (see col. 4, lines 35-63). As a note, Rasmussen further discloses when the call is in a call hold condition (see col. 6, lines 49-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, and Rasmussen to have the feature(s) storing connection information in one of said end terminals, stopping resynchronization attempts towards one of said call parties and stopping a related timer in order to prevent a call failure, in order to provide discontinuous transmission of a data call in a circuit-switched data environment, as taught by Rasmussen (see col. 1, line 62 - col. 2, line 7).

Regarding **claim 2**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 1), in addition Bäckström further discloses a method according to claim 1, wherein said supplementary call service is applied to a data call (see col. 1, lines 19-21; col. 5, lines 16-18), where data communication is provided via wireless access to the Internet.

Regarding **claim 3**, Bäckström, as applied to claim 2 above, discloses establishing communication between mobile station (15) and remote host (65) (see Fig. 2). Bäckström does not specifically disclose having the feature wherein said data call is a video call. However, the examiner maintains that the feature wherein said data call is a video call was well known in the art, as taught by Sayers.

Sayers further discloses the feature wherein said data call is a video call (see col. 13, lines 29-33), where H.245 is used for multimedia applications (e.g., videoconferencing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the feature wherein said data call is a video call, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13).

Regarding **claim 6**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 1), in addition Bäckström further discloses a method according to claim 1, wherein said signaling for establishing said call hold supplementary service comprises sending empty or fill frames or supervisory data link layer frames according to said connection information to one of said call parties in order to keep a

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connection protocol alive (see col. 3, line 46 - col. 4, line 6), where a period of inactivity is indicated by ARQ protocol frames by continuously retransmitting a series of zeros or empty frames indicating that the frames are idle while maintaining the connection between the IWU (40) and the PSTN/ISDN network.

Regarding **claim 8**, Bäckström, as applied to claim 1 above, discloses establishing communication between mobile station (15) and remote host (65) (see Fig. 2). Bäckström does not specifically disclose having the feature wherein said signaling for establishing said call hold supplementary service comprises sending video information or audio information to one of said call parties. However, the examiner maintains that the feature wherein said signaling for establishing said call hold supplementary service comprises sending video information or audio information to one of said call parties was well known in the art, as taught by Sayers.

Sayers further discloses the feature wherein said signaling for establishing said call hold supplementary service comprises sending video information or audio information to one of said call parties (see col. 11, lines 19-23; col. 12, lines 6-29; col. 13, lines 1-55), where H.245 is used for multimedia applications (e.g., videoconferencing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the feature wherein said signaling for establishing said call hold supplementary service comprises sending video information or audio information to one of said call parties, in order to provide conventional cellular systems that have basic service with the enhanced

functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13).

Regarding **claim 9**, Bäckström, as applied to claim 8 above, discloses establishing communication between mobile station (15) and remote host (65) (see Fig. 2). Bäckström does not specifically disclose having the feature wherein said video information comprises a still or moving video information. However, the examiner maintains that the feature wherein said video information comprises a still or moving video information was well known in the art, as taught by Sayers.

Sayers further discloses the feature wherein said video information comprises a still or moving video information (see col. 13, lines 29-33; col. 6, lines 49-52), where H.245 is used for multimedia applications (e.g., videoconferencing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the feature wherein said video information comprises a still or moving video information, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13).

Regarding **claim 10**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 1), in addition Bäckström further discloses a method according to claim 1, wherein said negotiation signaling is monitored by a mobile terminal (15) connected to one of said end terminals (10) (see col. 2, lines 53-67; col. 4, line

56 - col. 5, line 8), where the mobile station (15) is connected to data terminal equipment (10) in which the mobile station (15) monitors the activity to initiate connection.

Regarding **claim 13**, Bäckström, as applied to claim 1 above, discloses establishing communication between mobile station (15) and remote host (65) (see Fig. 2). Bäckström does not specifically disclose having the feature wherein said transcoding parameter defines a type of audio and/or video codec. However, the examiner maintains that the feature wherein said transcoding parameter defines a type of audio and/or video codec was well known in the art, as taught by Sayers.

Sayers further discloses the feature wherein said transcoding parameter (e.g., H.245) defines a type of audio and/or video codec (see col. 13, lines 29-33), where the H.245 encoder/decoder is used for multimedia applications (e.g., videoconferencing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the feature wherein said transcoding parameter defines a type of audio and/or video codec, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13).

Regarding **claim 16**, Bäckström, as applied to claim 1 above, discloses establishing communication between mobile station (15) and remote host (65) (see Fig. 2). Bäckström does not specifically disclose having the feature wherein said signaling for establishing said call transfer supplementary service comprises transmitting a codec parameter derived from said connection information to a network element having a transcoding capability, in order to

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provide a required transcoding function at said network element. However, the examiner maintains that the feature wherein said signaling for establishing said call transfer supplementary service comprises transmitting a codec parameter derived from said connection information to a network element having a transcoding capability, in order to provide a required transcoding function at said network element was well known in the art, as taught by Sayers.

Sayers further discloses the feature wherein said signaling for establishing said call transfer supplementary service comprises transmitting a codec parameter derived from said connection information to a network element having a transcoding capability, in order to provide a required transcoding function at said network element (see col. 13, lines 29-33), where the H.245 encoder/decoder is used for multimedia applications (e.g., videoconferencing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the feature wherein said signaling for establishing said call transfer supplementary service comprises transmitting a codec parameter derived from said connection information to a network element having a transcoding capability, in order to provide a required transcoding function at said network element, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13).

Regarding **claim 18**, Bäckström discloses the method according to claim 1, further comprising indicating changes of call characteristics to an upper layer entity (see col. 3, lines

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1-14, 35-51; col. 4, lined 8-31; Figs. 2-4), where the MSC (30) contacting an IWU (40) which adapts transmission and protocols between different communication networks and indicates changes in call characteristics such as connection request, inactivity, and identifiers, and

performing interworking in said upper layer entity (see col. 3, lines 1-14, 35-51; col. 4, lines 8-31; Figs. 2-4). Bäckström does not specifically disclose having the feature recognizing an application level compatibility of transferred calls. However, the examiner maintains that the feature recognizing an application level compatibility of transferred calls was well known in the art, as taught by Sayers.

Sayers further discloses the feature recognizing an application level compatibility of transferred calls (see col. 11, lines 19-23; col. 12, lines 6-29; col. 13, lines 1-55), where system provides interworking functions between the networks to provide supplementary services such as allowing the H.245 encoder/decoder which is used for multimedia applications (e.g., videoconferencing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the feature recognizing an application level compatibility of transferred calls, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13).

Regarding **claim 19**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 1), in addition Bäckström further discloses a method according to claim 1, wherein said signaling for establishing said supplementary

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service is performed by an interworking function provided in said telecommunication network (e.g., PLMN) (see col. 3, lines 1-14, 35-51; Fig. 2), where the IWU (40) provides interworking functions.

Regarding **claim 20**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 1), in addition Bäckström further discloses a method according to claim 1, wherein said telecommunication network is a mobile network. (e.g., PLMN) (see col. 3, lines 1-14, 35-51; Fig. 2).

Regarding **claim 22**, Bäckström discloses an apparatus (see col. 2, lines 53-57, 61-67; Fig. 1), where a request for access to data or services provided by a remote host, comprising:

a monitoring unit for monitoring on a signaling path (e.g., connection) between mobile station (15) which read on the claimed "end terminals" via a telecommunication network (e.g., PLMN and PSTN) a negotiation signaling for a multimedia call of respective call parties (see col. 2, lines 53-57, 61-67; col. 3, lines 35-51; Fig. 1), where a first connection is established and interworking unit monitors the call circuit connection between a data terminal equipment and an application host by examining the contents of ARQ protocol frames,

said monitoring unit being comprised in an interworking function portion of one of said end terminals (see col. 4, lines 49-65; col. 5, lines 1-10; Fig. 4), where a data connection mode is initialized between the DTE (10) and the MS (15) and monitored at the MS for the data transfer and request of the call connection circuit;

a memory for storing connection information detected by said monitoring unit (see col. 4, lines 7-11), where the first or original call circuit connection is stored within the register (88) of the MSC (30),

said memory being comprised in said one said one of said end terminals (see col. 2, lines 53-57), where the data terminal equipment (10) and mobile station (15) provide a communication connection in which a memory would be inherent as evidenced by the fact that one of ordinary skill in the art would clearly recognize; and

a signal processing and controller unit for generating a signaling towards at least one of said end terminals to establish said supplementary call service in response to said stored connection information, when said supplementary call service is invoked by one of said call parties (see col. 4, lines 18-31), where after a period of inactivity a second call circuit is requested by a data terminal equipment, subsequently comparing the current called party identification information with one stored in the MSC register for the first call circuit connection.

when the call is in a call hold condition (see col. 3, lines 35-51; col. 2, lines 37-39). As a note, Bäckström further teaches of a timer (112) for measuring periods (see col. 4, lines 42-45) releasing the radio link between the MCS and MS and maintaining a connection between the MS and DTE to avoid having the DTE lose synchronization (see col. 4, lines 49-63). Bäckström does not specifically disclose having the feature(s) said connection information defining at least one of a protocol used in a multimedia call between said call parties and a transcoding parameter used in the multimedia call, said memory being comprised in said one said one of said end terminals; wherein said supplementary call service is a call hold

supplementary service; and to stop resynchronization attempts towards one of said call parties and to stop a related timer, in order to prevent a call failure. However, the examiner maintains that the features said connection information defining at least one of a protocol used in a multimedia call between said call parties and a transcoding parameter used in the multimedia call; wherein said supplementary call service is a call hold supplementary service was well known in the art, as taught by Sayers.

Sayers further discloses the features said connection information defining at least one of a protocol used in a multimedia call between said call parties and a transcoding parameter used in the multimedia call (see col. 11, lines 19-23; col. 12, lines 6-29; col. 13, lines 1-55), where RIL3-CC; H.245, and SMS-PP provide transcoding parameters;

wherein said supplementary call service is a call hold supplementary service (see col. 11, lines 19-23; col. 12, lines 6-29). As a note, Sayers further discloses when the call is in a call hold condition (see col. 12, lines 6-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the features said connection information defining at least one of a protocol used in a multimedia call between said call parties and a transcoding parameter used in the multimedia call; wherein said supplementary call service is a call hold supplementary service, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13). The combination of Bäckström and Sayers does not specifically disclose having the feature(s) said memory being comprised in said one said one of said end terminals; to stop

resynchronization attempts towards one of said call parties and to stop a related timer, in order to prevent a call failure. However, the examiner maintains that the feature(s) to stop resynchronization attempts towards one of said call parties and to stop a related timer, in order to prevent a call failure was well known in the art, as taught by Rasmussen.

Rasmussen further discloses the feature(s)

said memory being comprised in said one said one of said end terminals (see col. 6, lines 14-28), where the cellular data endpoint (10) has a modem (100) that sets (or stores) connection-related parameters and during a re-establishing of a connection uses the connection-related parameters in which a memory would be inherent as evidenced by the fact that one of ordinary skill in the art would clearly recognize,

to stop resynchronization attempts towards one of said call parties (see col. 6, lines 11-53) and

to stop a related timer, in order to prevent a call failure (see col. 4, lines 35-63). As a note, Rasmussen further discloses when the call is in a call hold condition (see col. 6, lines 49-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, and Rasmussen to have the feature(s) said memory being comprised in said one said one of said end terminals; to stop resynchronization attempts towards one of said call parties and to stop a related timer, in order to prevent a call failure, in order to provide discontinuous transmission of a data call in a circuit-switched data environment, as taught by Rasmussen (see col. 1, line 62 - col. 2, line 7).

Regarding **claims 23, 25, and 28**, the claims are rejected for the same reasons as applied to claim 22 and as set forth above in the rejections of claims 6, 8, and 18 respectively.

Regarding **claim 29**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 1), in addition Bäckström further discloses an apparatus according to claim 23, wherein said apparatus is a mobile terminal connected to one of said end terminals (see Fig. 2), where the mobile station (15) is connected to the data terminal equipment (10).

Regarding **claim 31**, Bäckström discloses a method (see col. 2, lines 53-57, 61-67; Fig. 1), where a request for access to data or services provided by a remote host, comprising: monitoring on a signaling path (e.g., connection) between mobile station (15) which read on the claimed "end terminals" via a telecommunication network (e.g., PLMN and PSTN) a negotiation signaling for a multimedia call of respective call parties (see col. 2, lines 53-57, 61-67; col. 3, lines 35-51; Fig. 1), where a first connection is established and interworking unit monitors the call circuit connection between a data terminal equipment and an application host by examining the contents of ARQ protocol frames,

said monitoring being executed in an interworking function portion of a mobile switching center (30) of the telecommunication network (see col. 8, lines 1-15; col. 4, lines 49-65; col. 5, lines 1-10; Figs. 2 and 4), where a data connection mode is initialized between the DTE (10) and the MS (15) and monitored at the MSC (30) in connection with the IWU (40);

storing connection information detected in said monitoring (see col. 4, lines 7-11), where the first or original call circuit connection is stored within the register (88) of the MSC (30),

using said detected connection information to generate a signaling towards at least one of said end terminals to establish said supplementary call service, when said supplementary call service is invoked by one of said call parties (see col. 4, lines 18-31), where after a period of inactivity a second call circuit is requested by a data terminal equipment, subsequently comparing the current called party identification information with one stored in the MSC register for the first call circuit connection.

when the call is in a call hold condition (see col. 3, lines 35-51; col. 2, lines 37-39). As a note, Bäckström further teaches of a timer (112) for measuring periods (see col. 4, lines 42-45) releasing the radio link between the MCS and MS and maintaining a connection between the MS and DTE to avoid having the DTE lose synchronization (see col. 4, lines 49-63). Bäckström does not specifically disclose having the feature(s) storing connection information in one of said end terminals, said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding parameter used in the multimedia call; wherein said supplementary call service is a call hold supplementary service; and stopping resynchronization attempts towards one of said call parties and stopping a related timer in order to prevent a call failure. However, the examiner maintains that the features said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding parameter used in the multimedia call; wherein said supplementary call service is a call hold supplementary service was well known in the art, as taught by Sayers.

Sayers further discloses the features said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding

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parameter used in the multimedia call (see col. 11, lines 19-23; col. 12, lines 6-29; col. 13, lines 1-55), where RIL3-CC, H.245, and SMS-PP provide transcoding parameters;

wherein said supplementary call service is a call hold supplementary service (see col. 11, lines 19-23; col. 12, lines 6-29). As a note, Sayers further discloses when the call is in a call hold condition (see col. 12, lines 6-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the features said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding parameter used in the multimedia call; wherein said supplementary call service is a call hold supplementary service, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13). The combination of Bäckström and Sayers does not specifically disclose having the feature(s) storing connection information in one of said end terminals, stopping resynchronization attempts towards one of said call parties and stopping a related timer in order to prevent a call failure. However, the examiner maintains that the feature(s) storing connection information in one of said end terminals, stopping resynchronization attempts towards one of said call parties and stopping a related timer in order to prevent a call failure was well known in the art, as taught by Rasmussen.

Rasmussen further discloses the feature(s)
storing connection information in one of said end terminals (see col. 6, lines 14-28),
where the cellular data endpoint (10) has a modem (100) that sets (or stores) connection-

related parameters and during a re-establishing of a connection uses the connection-related parameters,

stopping resynchronization attempts towards one of said call parties (see col. 6, lines 11-53) and

stopping a related timer in order to prevent a call failure (see col. 4, lines 35-63). As a note, Rasmussen further discloses when the call is in a call hold condition (see col. 6, lines 49-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, and Rasmussen to have the feature(s) storing connection information in one of said end terminals, stopping resynchronization attempts towards one of said call parties and stopping a related timer in order to prevent a call failure, in order to provide discontinuous transmission of a data call in a circuit-switched data environment, as taught by Rasmussen (see col. 1, line 62 - col. 2, line 7).

Regarding **claim 32**, Bäckström discloses an apparatus (see col. 2, lines 53-57, 61-67; Fig. 1), where a request for access to data or services provided by a remote host, comprising the steps of:

a monitoring unit for monitoring on a signaling path (e.g., connection) between mobile station (15) which read on the claimed "end terminals" in a telecommunications network (e.g., PLMN and PSTN) a negotiation signaling for a multimedia call of respective call parties (see col. 2, lines 53-57, 61-67; col. 3, lines 35-51; Fig. 1), where a first connection is established and interworking unit monitors the call circuit connection between a data

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terminal equipment and an application host by examining the contents of ARQ protocol frames,

said monitoring unit being comprised in an interworking function portion of a mobile switching center (30) of the telecommunication network (see col. 8, lines 1-15; col. 4, lines 49-65; col. 5, lines 1-10; Figs. 2 and 4), where a data connection mode is initialized between the DTE (10) and the MS (15) and monitored at the MSC (30) in connection with the IWU (40);

a memory for storing connection information detected by said monitoring unit (see col. 4, lines 7-11), where the first or original call circuit connection is stored within the register (88) of the MSC (30),

said memory being comprised in said one said one of said end terminals (see col. 2, lines 53-57), where the data terminal equipment (10) and mobile station (15) provide a communication connection in which a memory would be inherent as evidenced by the fact that one of ordinary skill in the art would clearly recognize; and

a signal processing and controller unit for generating a signaling towards at least one of said end terminals to establish said supplementary call service in response to said stored connection information, when said supplementary call service is invoked by one of said call parties (see col. 4, lines 18-31), where after a period of inactivity a second call circuit is requested by a data terminal equipment, subsequently comparing the current called party identification information with one stored in the MSC register for the first call circuit connection.

when the call is in a call hold condition (see col. 3, lines 35-51; col. 2, lines 37-39). As a note, Bäckström further teaches of a timer (112) for measuring periods (see col. 4, lines 42-45) releasing the radio link between the MCS and MS and maintaining a connection between the MS and DTE to avoid having the DTE lose synchronization (see col. 4, lines 49-63).

Bäckström does not specifically disclose having the features said memory being comprised in said one said one of said end terminals; said connection information defining at least one of a protocol used in the multimedia call between said call parties and a transcoding parameter used in a multimedia call; wherein said supplementary call service is a call hold supplementary service; and to stop resynchronization attempts towards one of said call parties and to stop a related timer, in order to prevent a call failure. However, the examiner maintains that the features said connection information defining at least one of a protocol used in a multimedia call between said call parties and a transcoding parameter used in a multimedia call; wherein said supplementary call service is a call hold supplementary service was well known in the art, as taught by Sayers.

Sayers further discloses the features said connection information defining at least one of a protocol used in a multimedia call between said call parties and a transcoding parameter used in a multimedia call (see col. 11, lines 19-23; col. 12, lines 6-29; col. 13, lines 1-55), where RIL3-CC, H.245, and SMS-PP provide transcoding parameters;

wherein said supplementary call service is a call hold supplementary service (see col. 11, lines 19-23; col. 12, lines 6-29). As a note, Sayers further discloses when the call is in a call hold condition (see col. 12, lines 6-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström and Sayers to have the features said connection information defining at least one of a protocol used in a multimedia call between said call parties and a transcoding parameter used in a multimedia call; wherein said supplementary call service is a call hold supplementary service, in order to provide conventional cellular systems that have basic service with the enhanced functionality of supplementary services, as taught by Sayers (see col. 6, lines 25-30; col. 7, lines 10-13). The combination of Bäckström and Sayers does not specifically disclose having the feature(s) said memory being comprised in said one said one of said end terminals; to stop resynchronization attempts towards one of said call parties and to stop a related timer, in order to prevent a call failure. However, the examiner maintains that the feature(s) said memory being comprised in said one said one of said end terminals; to stop resynchronization attempts towards one of said call parties and to stop a related timer, in order to prevent a call failure was well known in the art, as taught by Rasmussen.

Rasmussen further discloses the feature(s)

said memory being comprised in said one said one of said end terminals (see col. 6, lines 14-28), where the cellular data endpoint (10) has a modem (100) that sets (or stores) connection-related parameters and during a re-establishing of a connection uses the connection-related parameters in which a memory would be inherent as evidenced by the fact that one of ordinary skill in the art would clearly recognize,

to stop resynchronization attempts towards one of said call parties (see col. 6, lines 11-53) and

to stop a related timer, in order to prevent a call failure (see col. 4, lines 35-63). As a note, Rasmussen further discloses when the call is in a call hold condition (see col. 6, lines 49-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, and Rasmussen to have the feature(s) said memory being comprised in said one said one of said end terminals; to stop resynchronization attempts towards one of said call parties and to stop a related timer, in order to prevent a call failure, in order to provide discontinuous transmission of a data call in a circuit-switched data environment, as taught by Rasmussen (see col. 1, line 62 - col. 2, line 7).

Regarding **claim 33**, the claim is rejected for the same reasons as set forth above in the rejection of claim 22.

Regarding **claim 34**, the claim is rejected for the same reasons as set forth above in the rejection of claim 32.

Claims 14-15 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bäckström (US 5,903,851)** in view of **Sayers et al. (hereinafter Sayers) (US 6,539,237 B1)** and **Rasmussen (US 6,088,600)** as applied to claim 1 and 22 above, and further in view of **Gerszberg et al. (hereinafter Gerszberg) (US 6,424,646 B1)**.

Regarding **claim 14**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 1). The combination of Bäckström and Sayers does not specifically disclose having the feature wherein said signaling for

establishing said call transfer supplementary service comprises a fallback signaling for converting a connection to one of said call parties into a speech mode. However, the examiner maintains that the feature wherein said signaling for establishing said call transfer supplementary service comprises a fallback signaling for converting a connection to one of said call parties into a speech mode was well known in the art, as taught by Gerszberg.

In the same field of endeavor, Gerszberg discloses the feature wherein said signaling for establishing said call transfer supplementary service comprises a fallback signaling for converting a connection to one of said call parties into a speech mode (see col. 7, lines 6-17), where voice communications are ensured despite a failure of the digital data link.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, and Gerszberg to have the feature wherein said signaling for establishing said call transfer supplementary service comprises a fallback signaling for converting a connection to one of said call parties into a speech mode, in order to provide services to an end user by multiplexing and coordinating many digital services onto a single line, as taught by Gerszberg (see col. 2, lines 12-24).

Regarding **claim 15**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 14). The combination of Bäckström and Sayers does not specifically disclose having the feature wherein said fallback signaling is performed towards both call parties, if said connection information indicates that two data calls cannot be adapted. However, the examiner maintains that the feature wherein said fallback signaling is performed towards both call parties, if said connection information

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indicates that two data calls cannot be adapted was well known in the art, as taught by Gerszberg.

Gerszberg further discloses the feature wherein said fallback signaling is performed towards both call parties, if said connection information indicates that two data calls cannot be adapted (see col. 7, lines 6-17), where voice communications are ensured despite a failure of the digital data link.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, and Gerszberg to have the feature wherein said fallback signaling is performed towards both call parties, if said connection information indicates that two data calls cannot be adapted, in order to provide services to an end user by multiplexing and coordinating many digital services onto a single line, as taught by Gerszberg (see col. 2, lines 12-24).

Regarding **claim 26**, the claims are rejected for the same reasons as applied to claim 22 and as set forth above in the rejection of claim 14.

Regarding **claim 27**, the claims are rejected for the same reasons as applied to claim 26 and as set forth above in the rejection of claim 16.

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Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Bäckström** (US 5,903,851) in view of **Sayers et al.** (hereinafter Sayers) (US 6,539,237 B1) and **Rasmussen** (US 6,088,600) as applied to claim 16 and 22 above, and further in view of **Hämäläinen et al.** (hereinafter Hämäläinen) (WO 99/41920) and **Gerszberg et al.** (hereinafter Gerszberg) (US 6,424,646 B1).

Regarding **claim 17**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 16). The combination of Bäckström and Sayers does not specifically disclose having the feature wherein said codec parameter is transmitted to said network element, if a fallback signaling to one of said call parties has failed. However, the examiner maintains that the feature wherein said codec parameter is transmitted to said network element was well known in the art, as taught by Hämäläinen.

In the same field of endeavor, Hämäläinen discloses the feature wherein said codec parameter is transmitted to said network element (e.g., mobile services switching centre) (see pg. 11, line 1 - pg. 12, line 13; pg. 13, lines 1-24), where the multimedia parameters for multimedia services are transmitted to the mobile services switching centre to request speech or data service. The mobile services switching centre acknowledges receipt of the multimedia parameters.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, and Hämäläinen to have the feature wherein said codec parameter is transmitted to said network element, in order to improve the efficiency of data transmission between communication devices so that the properties of the receiving device are taken into account, as taught by Hämäläinen (see

pg. 4, line 26-31). The combination of Bäckström, Sayers, and Hämäläinen does not specifically disclose having the feature if a fallback signaling to one of said call parties has failed. However, the examiner maintains that the feature if a fallback signaling to one of said call parties has failed was well known in the art, as taught by Gerszberg.

Gerszberg further discloses the feature if a fallback signaling to one of said call parties has failed (see col. 7, lines 6-17), where voice communications are ensured despite a failure of the digital data link.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, Hämäläinen, and Gerszberg to have the feature if a fallback signaling to one of said call parties has failed, in order to provide services to an end user by multiplexing and coordinating many digital services onto a single line, as taught by Gerszberg (see col. 2, lines 12-24).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Bäckström (US 5,903,851)** in view of **Sayers et al. (hereinafter Sayers) (US 6,539,237 B1)** and **Rasmussen (US 6,088,600)** as applied to claim 1 above, and further in view of **Bressler (US 6,584,190 B1)**.

Regarding **claim 21**, the combination of Bäckström and Sayers discloses every limitation claimed, as applied above (see claim 1). The combination of Bäckström and Sayers does not specifically disclose having the feature wherein said connection information is at least partly received through an outband signaling. However, the examiner maintains

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that the feature wherein said connection information is at least partly received through an outband signaling was well known in the art, as taught by Bressler.

In the same field of endeavor, Bressler discloses the feature wherein said connection information is at least partly received through an outband signaling (see col. 3, lines 14-23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bäckström, Sayers, and Bressler to have the feature wherein said connection information is at least partly received through an outband signaling, in order to provide additional services, as taught by Bressler (see col. 1, lines 21-24; col. 2, lines 1-3).

Response to Arguments

3. Applicant's arguments with respect to claims 1-3, 6, 8-10, 13-23, 25-29, and 31-34 have been considered but are moot in view of the new ground(s) of rejection necessitated by the amended language and/or new limitations.

In response to applicant's arguments, the Examiner respectfully disagrees as the applied reference(s) provide more than adequate support and to further clarify (see the above claims for relevant citations).

4. The Examiner requests applicant to provide support for any further amended claim language.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (571) 272-7907. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WJD,JR/

WJD,JR
30 November 2007


CHARLES N. APPIAH
SUPERVISORY PATENT EXAMINER